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AUTHOR Sirotnik, Ken; And Others
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ABSTRACT

This paper presents a study of the contrast of social and clinical perspectives on the selection and use of information by school staff, including: (1) an outline of the context and activities of the study; (2) a definition and discussion of the basic distinction between social and clinical perspectives; (3) an examination of case material accumulated from the study; and (4) a discussion of implications for school-based information systems. The study was conducted in a three-year secondary school of approximately 2,000 students, just outside of the greater Los Angeles area. A selected group of five to ten teachers, two administrators, and a counselor helped to develop the means whereby the district's extant information system could be modified or augmented to better meet the needs of staff at the building level. Three reporting mechanisms were designed for organizing student information: Student-At-A-Glance, Class-At-A-Glance, and School-At-A-Glance. The last phase of the study revolved around the actual use of reports by school staff. The ongoing assumption derived from the study is that multilevel analysis and interpretation of school-based information has an immense potential for facilitating individual-diagnostic, class-instructional, and school-organizational planning decisions and evaluations. (LMO)

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SOCIAL VS. CLINICAL PERSPECTIVES ON THE USE OF INFORMATION: Implications for School-based Information Systems

Ken Sirotnik and Leigh Burstein
Project co-Directors

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SOCIAL VS. CLINICAL PERSPECTIVES ON THE USE OF INFORMATION: Implications for School-Based Information Systems

Kenneth A. Sirotnik, Donald W. Dorr-Bremme and Leigh Burstein
University of California, Los Angeles

An idea whose time has come is that of comprehensive, computer-based, information systems for districts and schools. Of course, the idea of collecting different kinds of information and having it on hand for use in districts and schools is not really new in and of itself. For years, information has been formally and informally stored in files at both the district and building levels; and, in one form or another, subsets of this information have been made available for certain purposes (eg., cumulative student records at the school level and district reports of test score performance for students, grade levels, schools and so forth).

Needless to say, however, such information was limited in both quantity and quality due to the enormous resources required to store and retrieve data "by hand." But with the advent of computer technology, storage and retrieval issues were largely resolved. In fact, over the last decade or so, a number of districts have begun experimenting with main-frame, computerized information systems modeled after the types that large businesses had already developed (ie., so-called "management information systems"). Now, with microcomputer technology well in-hand, districts have the capacity to make information easily, inexpensively and readily available at the school building level. (See Dussault, 1985; Idstein, 1985; and Hathaway, 1984 for examples of current and sophisticated district maintained information systems.)

Another idea whose time may be coming is the notion of more directly involving many of the primary users of information systems -- local school staffs -- in the development, implementation, and use of these systems. As many are now realizing in the world of big business, linear, top-down manangement paradigms -- and concommitant information systems -- do not necessarily work, especially in an age of increasing reliance upon a world economy, the sharing of information, networking, and so on. Alternatively, nurturing employees as stakeholders in the coporation, attending to the needs of employees, and developing meaningful opportunities and mechanisms for employee input and autonomy are likely to increase corporate productivity, (See, for example, the analyses by Mitroff, 1985, Naisbitt, 1982, Peters and Waterman, 1982).

In the world of schooling, similar conclusions are surfacing, namely, that school people -- administrators, teachers, counselors, and special education staff -- must be intimately involved with (come to "own") any significant school improvement program or process. (See, for example, the analyses by Berman, 1981; Berman and MacLaughlin, 1978, and Ward and Tikunoff, 1982). From a more philosophical perspective, we have argued for the involvement of school people in knowledge generating and using processes as a professional right and responsibility of educators (Heckman, Oakes and Sirotnik, 1983; Sirotnik, 1984a; and Sirotnik and Oakes, 1981, 1982 and 1986).

Whatever the basis of argument, it would appear that school people may have increasing opportunities to generate and use information for local school improvement. In anticipation of this possibility, and as part of a program of research on the idea and use of comprehensive school-based information systems, we decided to study

how school staff interact with information in the context of ordinary day-to-day work in schools. How do staff "make sense" out of the kinds of data ordinarily found in comprehensive information systems? When given the opportunity to become involved in developing such systems, on what basis do teachers, administrators, and counselors decide to include (or exclude) potentially relevant information? What are the operant paradigms of information needs and uses?

These (and other questions) either directed or emerged from our inquiry over the past several years into the construction and use of information systems by and for people who work in schools. The more complete story of this project is contained in several monographs; see Dorr-Bremme, 1985, Sirotnik and Burstein, 1985, and Burstein and Sirotnik, 1984. In this paper, we restrict our attention to what emerged from the project as perhaps the single most important theme cutting across the issues raised in the above questions -- the contrast of social and clinical perspectives on the selection and use of information by school staff. First, we will outline briefly the context and activities of the study. Second, the basic distinction between social and clinical perspectives will be defined and discussed. Third, the issue will be "brought to life" using case material accumulated from our experiences in the study. Finally, we will discuss what we see as the implications for school-based information systems.

The Study

King High School (a fictitious name) is a three-year (10th through 12th grade) secondary school of approximately 2,000 students located in a two-high school suburban district (K-12 enrollment of approximately 20,000 students) just outside of the greater Los Angeles

area. We selected this site in response to both national and local concerns about secondary school reform; moreover, King High was part of a district where a computer-based information system already existed. The school was in the throes of addressing pressing problems such as high absenteeism and drop-out rates and the need for curricular reform to better accommodate student diversity and prepare students for post-graduation work and education. Considerable interest was also evidenced in the district and at the school (primarily among administrators, counselors and several teachers) around the idea of information systems and how their current system could better serve the needs of major school improvement programs as well as routine, day-to-day organizational and instructional activities. These conditions, therefore, rendered King High a realistic site for studying school staff reactions to the concept and use of information at school and classroom levels.

Our modus operandi throughout the project was working hand-in-hand with a selected group of five to ten teachers, two administrators, and a counselor to develop the means whereby the district's extant information system could be modified or augmented to better meet the needs of staff at the building level. (We will refer to these representatives of the school and ourselves, collectively, as the "work group.") Towards this end, we developed working relationships with key district staff, particularly in the data processing division, so that any changes or additions could be easily implemented into existing hardware and software configurations.

One of the first tasks of the work group was to review the contents and accessibility of the district's information system. As this task unfolded, it became clear the the teachers were aware of

only some of the information and reports that were possible to get from the extant system, the procedures for obtaining the reports were slow, not always responsive and not always flexible enough for specific needs, and that there were much more data of potential use that were not contained in the information system. (See Burstein, 1984.) Among other things, it was decided that student survey information should be added to the system and, in combination with other information already in the system, should be disseminated to teachers in various forms depending upon anticipated purposes for using information.

The next series of meetings of the work group centered around constructing the student survey. This work was facilitated by a compendium of potential survey items, pertaining to school and classroom issues, developed previously (Sirotnik, Burstein and Thomas, 1983). Through an interactive process of dialog, sorting, sifting, setting priorities, revising, subtracting irrelevant items, and adding new ones, the work group converged on a student survey designed to be completed during an ordinary secondary school period (about 50 minutes). The survey was administered to students in May of 1984, was computerized and scored by the district's data processing division, and was further analysed at UCLA for the purposes of this project.

Subsequently, work group meetings focused on the likely analyses and reporting formats using the student survey data and other data in the information system that might capture the interests and information needs of the school staff. The details of these meetings and the resultant analyses and reports are treated in more depth elsewhere (Dorr-Bremme, 1985 and Sirotnik and Burstein, 1985). Suffice it to note here that the work group eventually designed three reporting mechanisms for organizing student information:

- "Student-At-A-Glance" report -- a roster of individual student data prepared for each teacher for each class containing information such as grade point averages, days absent, achievement test scores, academic self-concepts, educational expectations, general attitudes toward school, etc. (In all, fifteen pieces of information per student were included.)

- "Class-At-A-Glance" report -- aggregated student data (in the form of distributions) for each teacher for each class containing information on instructional grouping preferences, subject matter preferences, and instructional activity preferences of students.

- "School-At-A-Glance" report -- aggregated student data at the school level (cross-tabulated by grade and by sex) pertaining to such issues as the curricular goal emphases (academic, personal, social, vocational) in the school, student aspirations and expectations, actual numbers of students going on to college, etc.

Trial versions of these reports were developed first by us and shared with the entire staff at King High School. Based upon teacher input, these report ideas were revised and program specifications were developed to enable the district to mass produce the student and class reports for all teachers the following semester. Indeed, approximately two weeks into the semester (mid February, 1985), these reports were disseminated to all teachers in small group meetings designed to review the purpose of our project, the report forms, and some issues regarding both use and abuse of information.

Finally, the last phase of the study revolved around the actual use of these reports by the school staff. For approximately 2½ months, we left the teachers on their own in terms of using (or not using) the information in these reports. Then we interviewed a small sample of teachers and surveyed a larger sample regarding their use of the information. In particular, we were interested in acertaining their views regarding how they used the forms (or why they didn't use them), what specific information was most often used, what deletions,

modifications, additions, or format changes were desired, and what abuses (if any) might have occurred. Based upon a reasonably representative sample of teachers (about 44 out of 80), the results indicated that 60% to 65% of these teachers took the information into account in some fashion at least once after having received the reports. However, their use of the information was rather limited in both scope and variety; that is, only a few pieces of individual student information were utilized (primarily grade point averages, test scores, and academic expectations), and the aggregated report of student data at the class level was rarely used at all. Many teachers indicated a concern regarding the potential biasing effect of having information on individual students initially in the semester. Finally, given this concern and the variety (but lack of consistency) in the modifications suggested by teachers, it appeared that a menu-driven approach for generating reports as requested by individual teachers would be most desirable.

This description and summary of the context and activities of the study should be sufficient to set the stage for the following discussion of the "social vs. clinical" theme that emerged over the course of the project.

Social and Clinical Perspectives on Information Utility

Often in the deliberations over which piece of student survey data might be useful, particularly for class and school level reports, considerable differences of opinion seemed to occur between members of the work group (including us). For almost every potential survey item, one or more staff members had a "burning desire" for the information while one or more members could see no reason whatsoever for the data. Usually, the generic form of the debate seemed to take

the forms of "I don't see how I could use this piece of information in teaching a student" versus "I think these data could help us (or me) make planning decisions about the school (or my class)."

This variability in perceptions did not seem to be accounted for by any obvious factor such as departmental affiliation (eg., English versus mathematics), years of teaching experience, and the like. Instead, the disagreements seemed to be more a matter of differing orientations than they were of informational content. Indeed, after considerable reflection on the process and perception-testing with the work group participants, a "new old" distinction emerged that we believe has considerable heuristic value for facilitating the identification and use of relevant information. This distinction, put simply, is the social versus clinical orientation surrounding the anticipated and actual uses of information. The social-clinical distinction is not a new one in work relating to assessing organizations, but its manifestation in the school setting as people attempt to make sense out of comprehensive information systems may be a new wrinkle.

The discussions that occurred in the work group pertaining to student academic self concept questions is illustrative. Most teachers, when considering the potential use of an agree-disagree item like "I'm proud of my schoolwork," thought in terms of "How can I use Johnny's response to this question to help him learn?" Among those teachers, some were sanguine about the item's potential, other were not. Although important, these differences are not our concern here. All these teachers were operating out of the same perspective, that of counselor vis a vis student -- an individual or clinical orientation.

Some teachers, however, considered the item more in terms of "How can I use students' responses to this question to facilitate my teaching and their learning?" Again, there were differences of opinion among this smaller group of teachers, but that is expected. The point is that all of these teachers were trying to tap into the organizational or social value of the information, i.e., the potential of data to inform decisions regarding the interaction between individuals in a group setting (e.g., a classroom). One or two staff went further by considering the potential for aggregating student responses at the school level -- perhaps even in relationship to other important questions -- to help inform staff planning processes.

The social-clinical contrast operated even more sharply when school staff considered the value of less psychologically oriented questions such as:

> All schools teach pretty much the same things, but they may think some things are more important than others ... Which one of these does this school think is the most important thing for students?
>
> A. To work well with other people, become a better citizen, and so forth.
> B. To learn the basic skills in reading, writing, arithmetic, and other subjects.
> C. To become more self-confident, creative, self-disciplined, and independent.
> D. To be prepared for a job or a career.

People operating initially out of a clinical perspective saw very little value in this question. Those able to relate initially to a more social perspective reacted quite the opposite. Moreover, the "social disposition" did not preclude the ability to readily see the clinical uses of information. However, it took considerable discussion to "reverse the tide" of the clinically oriented staff.

Our role in discussions of this nature was clearly ambivalent due to our extensive work in conceptualizing information systems as

systemic, that is, as serving needs at all levels (e.g., individual, class, department, grade, school, and district) of the educational enterprise. Thus, we intervened a number of times in these discussions attempting to clarify the individual, diagnostic, clinicial orientation, on the one hand, and the organizational, planning, social perspective, on the other. These interventions seemed to help clarify and facilitate the discussion, at least for the moment, and also permitted the observation that some teachers simply placed less value on the social perspective in using information. (See case material in the next section.) Nevertheless, it seemed to us that during these discussions, teachers could more easily sort out the substantive aspects of inclusion-exclusion decisions; they could, for example, come to agree that an item like "How much do you like mathematics?" had less diagnostic use at the individual level, yet could be aggregated at the classroom level to provide information helping the teacher deal with class climate and learning environment issues.

As the project progressed, therefore, we became increasingly aware of the tension between our working concept of "systemic evaluation" -- our notion of schools as "cultural (or social) ecologies" where structures, functions, people, roles, norms, perceptions, etc. are in continual interaction with one another -- and the predispositon of staff (particularly teachers) to think and act clinically. Clearly, our concept places considerable emphasis on the social use of information, although using information for diagnostic and counseling purposes is certainly part of the process. In general, however, we have conceptualized systemic evaluation as intrinsic to the process of school-based renewal and change (Sirotnik, 1984b). Information is viewed as a catalyst for evaluative discourse and

action; the process of renewal is seen as the systematic and rigorous deliberation over any and all information relevant to school improvement. These ideas not only call attention to the importance of the social uses of information, they reflect a commitment to a holistic renewal process that is based on a model of the school as a cultural-ecological system. Its parts are conceived to be interdependent, and it is ideally the entire system upon which renewal efforts focus. This suggests, therefore, that information use toward renewal is necessarily (though not exclusively) a social process in which all relevant actors engage.

Certainly the idea of human organizations as cultural or social ecologies has enjoyed considerable success in both theory and practice in education, sociology, and psychology ever since the seminal work by Murray (1938) postulating the interaction of human needs with environmental "press." His conceptualization, of course, impacted directly the enduring notion of measuring organizational environments through the perceptions of its members (e.g., Pace and Stern, 1958; Halpin and Croft, 1963; Moos and Trickett, 1974). (See the review by Insel and Moos, 1974.) Moreover, the cultural-ecological perspective is carried through in much of the work by many concerned directly with both understanding and improving the organization of schooling. (A partial list includes contributions such as Barker and Gump, 1964; Bronfenbrenner, 1976; Goodlad, 1975; Gross, 1959; Hurn, 1978; Jackson, 1968; Lightfoot, 1983; Lortie, 1975; Parsons, 1959; Sarason, 1971 and 1982; and Waller, 1932.)

Somewhat ironically, however, the cultural-ecological model of schooling suggests not only the potential viability of the systemic evaluation concept, it also helps explain why current conditions and

circumstances in schools (particularly at the secondary level) mitigate against the idea. At least three rather profound issues come to bear in the human-ecological interaction: (1) structural concerns regarding the way schools are organized (e.g. time and opportunity to make use of information); (2) functional concerns regarding the purposes for having information (e.g., accountability, instructional diagnosis, program evaluation); and (3) epistemological concerns regarding what constitutes appropriate and useful knowledge (e.g., moment-to-moment decision-making based upon experience and intuition in contrast to a more technological and quantitative approach relying upon measured constructs and information storage and retrieval).

In regard to structural concerns, the hierarchical organization of schooling, the isolation of teachers behind their classroom doors, and the ability of teachers to circumvent bureaucratic rquirements and to passively resist organizational change are legendary; see, for example, work by Goodlad and Klein, 1970; Lortie, 1975; Meyer and Rowan, 1978; Tye and Benham-Tye, 1984; Warren, 1975; and Weick, 1976. Even in the most well-intensioned districts and schools, quality time for sustained staff involvement in major school improvement activities is not ordinarily available given the way schools are organized. These "cultural regularities" (Sarason, 1971) serve to promote and reinforce teachers' natural tendencies (see below) to think clinically about their work in classrooms.

If we think about the function that information ordinarily fulfills, at least as perceived primarily by teachers and administrators, it would be this: monitoring student achievement through routine testing in the classroom and required standardized testing for accountability purposes as well. In our study, when we

interviewed and surveyed teachers regarding how they used the student report form, the primary pattern centered on contrasting CTBS test scores and grade point averages for each student. Indeed, in the classroom, teachers sometimes use their own tests diagnostically and, almost always, use them for assigning grades to individuals. Should these data ever be aggregated at the classroom level, it would usually be to establish the "curve" for grading purposes. At the school (and district) levels, standardized (and even criterion referenced) test results are most often used normatively for comparing schools with one another. Sometimes these results are used diagnostically; but rarely are they used for planning. (See Dorr-Bremme, Herman, and Doherty, 1983.) Moreover, it is relatively easier to communicate (and have understood) test score information for individual students. When the same information is aggregated for organizational development purposes (e.g., curriculum development and planning), its meaning becomes problemmatic to more staff.

Finally, if we consider the way people ordinarily make sense out of their daily worklife, it can be argued that an "epistemological clash" is in the making with the introduction of a rigorous, operationally defined, comprehensive information system into their sphere of practical work. Similar conclusions have been reached by researchers who have done in-depth case studies of how teachers make day-to-day decisions in their classrooms: teachers do it on the basis of unique, even artistic, ways of combining intuition, experience, conventional wisdom, etc. accumulated over their years of teaching and socialization into schooling. (See, for example, Dorr-Bremme, 1983 and MacKay, 1978.) Moreover, the minute-by-minute (often, second to second) decisions teachers make during an instructional period are

laced with interacting contingencies not easily informed by information systems no matter how quickly retrievable.

In our view, the structural and functional concerns noted above are definite hindrances as far as the concept of systemic evaluation is concerned. Yet, with some realignment of values and resource priorities, we believe they can be largely overcome, or at least sufficiently ameliorated so as to provide a reasonable context in which to involve teachers and administrators in the construction and application of alternative ways for using information. The third concern, potential conflicts between technological knowledge and "personal knowledge" (Polanyi, 1958) is not, in our view, a hindrance. Indeed, developing ones own, personal "information system" based largely upon a more phenomenological interpretation and understanding of daily work activities is an epistemologically legitimate knowledge-producing and using process. As we will see shortly, these processes are recurrent in most professions, as professionals reflect and act in practice. (See, for example, Friedson, 1970, Garfinkel, 1967, and Schon, 1983.) Moreover, as we will argue in the section on implications, the "resolution" of the social-clinical dilemma -- and, in the context of using information systems, the associated issue of technical versus personal knowledge -- is in eschewing the concern as an either-or issue. The most useful and practical orientation may well be a "socioclinical" approach to information -- a recognition that information interpreted out of context may be no information at all (Mishler, 1979), and that information interpreted and used in context can be useful at many levels and in many forms.

In what follows, we will further ground the contrast and tension between the social and clinical perspectives in actual case material

accumulated during our study at King Senior High School.

The Clinical Predisposition: A Case in Point

Based upon the information use survey results and teacher interviews (Dorr-Bremme, 1985 and Sirotnik and Burstein, 1985) and the case material to follow, teachers at King High did not routinely or easily think of information in terms of its social uses. This is not to say that when given the appropriate opportunity (purpose, setting, time, training, etc.), teachers were unable to work with information at levels other than the individual student. It was clearly the case, however, that without such opportunities, teachers tended not to be inclined towards selecting items for, or using analyses based upon, aggregated data for groups. (Not surprisingly, this was less the case for administrators in our work group than it was for the teachers.) The predominate mode for staff was to approach information and their information needs from a clinical perspective.

Two hallmarks of the clinical perspective, according to sociologists of applied knowledge, are its orientation toward action and its emphasis upon the individual case. Elaborating on these points, Homans (1950) explained that:

> Clinical science is what a doctor uses at his patient's bedside. There, the doctor cannot afford to leave out of account anything in the patient's condition that he can see or test. It may be the clue to the complex ... In action we must always be clinical. Analytic science is for understanding but not for action.

Noting with Homans that the aim of the clinical practitioner "is not knowledge but action," Friedson (1970) adds that "the clinician is prone in time to trust his own personal first-hand experience" and to be "particularistic," stressing the uniqueness of each case to be treated. The "clinical rationality," Friedson concludes, "is

particularized and technical: it is a method of sorting the enormous mass of concrete data confronting [the practitioner] in individual cases (p. 171)."

It is the clinical orientation as defined here that tends to characterize the thinking of teachers at King High School. Their central interest is particularistic. They want to know primarily about "this student" or, secondarily, "this class"; rarely do they manifest spontaneous interest in knowing about the students in "this school," or even those in a given department or program. They require that information be relevant to action, recurrently asking "What can I do with that?" and declining to gather information because "I can't do anything with that." In particular, they seek information that supplements, and helps them sort and clarify the plethora of personal, first-hand information they gain about particular students and class groups as they interact with them.

During the various meetings held with the work group and the several held with the staff as a whole, extensive process notes were taken and cumulated over the duration of the project. Only a small portion of this material will be introduced here to support our view of how school staff tend to interact with information.

Note #4 (2/22/84): CSE/UCLA Staff Member A has opened this first meeting to discuss "what information you'd like to have available" by underscoring the many levels at which data can be aggregated to address needs of different types. He mentions "information for or on specific programs" and calls attention to the importance of data for "constant monitoring at the achool level -- course enrollments, drop out rates." He expands on his belief that information at the school level can help in the "planning and design, in studying the impact of new programs you want to start ... In my view, this is what an information system should do." Two hours pass and the group takes a break. Up to now, none of the teachers mentioned anything except information they'd like to have on their individual students and classes. The assistant principal, in a brief comment, has expressed interest in "a graph that makes attendence very very visible, that would show the match with time of day, day of week, neighborhood grid

... this would help in working on attendence with neighborhood organizations and elementary schools."

The group returns from the break and continues to discuss information on individual students and classes. As the 3:30PM time for drawing the meeting to a close arrives, "A" again encourages King High teachers to consider "measuring school climate issues" and the "on-going monitoring" functions of a comprehensive evaluation system. He asks each work group member to come into the next meeting with a list of questions or issues regarding "(1) the kinds of things (information) you need for your students, classes, departments and so on, or (2) the kinds of things you'd want to collect at the schools level on an on-going basis." The meeting ends with no further discussion of school-level information.

Despite considerable prompting to consider other levels of data, then, teachers in this initial meeting framed their discussion of information needs exclusively in clinical terms. Their interests were in data on individual students and particular classes. And despite "A's" assignment in preparation for the next meeting a week later, that meeting too focused almost exclusively on clinical information needs.

Note #5 (2/29/84): The meeting opens with a discussion of the foreign language teacher's list of desired information. (See Note #2.) The list focusses on individual student characteristics. CSE/UCLA Staff Member B then asks for other ideas.
Social Studies Teacher: "I was talking to the people in my department, and the most important thing people want to be able to do is to see what their class is like, so they can group kids for cooperative learning, so they don't assign work that's beyond the kids' level, things like that."
"B": "There's not some other information that you, as a teacher, think is more valuable ... ?"
Social Studies Teacher: "Sure, there's lots of information that's valuable. And sure, I can wait for the class to begin and see the kids work, and then I get that information. But what they want, what we want is for the beginning of the semester, when you don't know your kids yet."
"B": "Would they want students' GPA [grade point average] in the general area?"
Social Studies Teacher: "No, people didn't want to get that specific. What you need to know is what level are kids reading at? What are their comprehension skills? How well can they write?"

English Teacher: "Yeah, just a rough picture. You can modify it once you start working with them."
Assistant Principal: "You wouldn't want their GPA in the general area, as "B" was suggesting?"
Social Studies Teacher: "No, but I'd like to have their grades in particular English classes. That alerts me to the kinds of success they have. It tells me not only how well they're doing but the kinds of strengths and weaknesses."

A few moments later, the foreign language and social studies teachers turn to explaining some of the value of background data on idividual students.

Social Studies Teacher: "What we need is information that lets us respond to the kid who says, when you give them the assignment, 'I can't read five pages.' you want to be able to go to your list [a single page with information on each student in the class] and say, 'That's not what this tells me. You're reading scores show you can do this...'"
Foreign Language Teacher: "Right. 'And it says here [gesturing to imaginary information sheet] you have no job; you're in a college prep program, so I don't see a problem.'"

Still further on in the meeting, UCLA staff try to turn discussion away from information on individual students and classes and toward consideration of school-level data needs. "B" for instance, argues that information on students' preferred "learning methods and strategies" would need to be "content-free if it's to be useful schoolwide." Three teachers immediately respond that (as one put it) "you can't ignore the subject matter if this is going to help us plan our classes." "A" suggests that you could bank questions on instructional practices as part of an on-going effort to track "the health of the school." As an example of such questions, he points to a another survey the group is using as a stimulus for ideas. The agree-disagree questions listed there include such items as "The teacher gives me too much work to do in this class"; "Students know the goals of this class"; and "The teacher tells us how to correct mistakes in our work." "A" explains that these could be asked about "the teachers in this school in general," instead of about particular teachers in particular classes, as in the original. King High teachers reply that this information would be seen as "too threatening" if gathered about individual teachers and that "it wouldn't be useful to anyone" if students answered about teachers in general. Teachers fears are discussed, and the meeting ultimately ends with no further discussion of school- or program-level information.

These transactions demonstrate the persistence of teachers' clinical thinking. As in Note #4 above, the King High teachers in the working-group and the colleagues with whom they spoke simply could not independently generate suggestions for data that would be worthwhile at the school level. Here too it is evident that they want

information that can help them make sense of and respond to individual cases: information for planning their class; information for responding to the student who says "I can't read five pages"; and so on. Furthermore, they want this particularistic information at the beginning of the semester. Once teaching and learning are under way, they will have additional information on students from their own experiences with them. This information will allow them (as one teacher maintains) to "modify" the general view of the individual learner that they can obtain from test-score and GPA data. Thus, the clinicians' tendency to trust personal, first-hand knowledge comes through, as well, in these conversational exchanges.

The clinician's action orientation is evident in all the above, but it is especially apparent in the following.

NOTE #6 (April 3, 1984). The group is working its way through some student attitude surveys originally used in the a prior research study, selecting items and issues that seem likely to generate useful information that can be tied to the District's huge data file. About twenty minutes have gone by when the group turns to a set of agree-disagree questions headed, "Relation to Other Students." Amongthe six items are such statements as "I'm popular with kids my own age" and "It's hard for me to make friends." Introducing their consideration, CSE/UCLA staff member B explains that they "cluster to yield a score which you could call 'self-concept toward others.'" A debate erupts about who would use this information. The foreign language and health teachers maintain they're not interested. "I wouldn't have any need for that," says the former. CSE/UCLA staff member A argues that these data could shed light on the school-wide attendence problems "you've all been concerned with." He also notes it could be used in an on-going monitoring of the health and climate of the school. Ken Sirotnik adds, "The question here may be not so much what you're going to do with this in your class, but what's a whole faculty going to do if they find many students have a low self-concept, there's attendence problems at the same time. Shouldn't they know that?"
Health Teacher: "Look, what I'm saying is who uses this? If I were starting a school, I might want know this, but who is there right now?"
Social Studies Teacher: "I think the counselors might want it. I'd want it if I were a counselor."
Foreign Language Teacher: Even though I didn't choose these, I have no objection to asking them.

Math Dept. Chair: "You could use this for longitudinal monitoring, though, like "A" has said, couldn't you?"
"A": "I hope so."
Health Teacher: "That seems like we're just collecting information for the sake of collecting information."
English Teacher: "No, I think this could really help with the 'Track A' kids, in confluent education. I'd want to know how my students feel about themselves."
Discussion passes on without a consensus.

Soon attention turns to a set of questions that elicit students' view of the quality of the school's "physical plant." Everyone agrees this is within the administration's purview. The issue of whether to include these is resolved when one teacher says, "Let [the assistant principal] and [the principal] decide if they want it."

Near the end of the meeting, a set of questions about why students elect the classes they do is examined. Several teachers point out that since the school administration has just made decision to limit students' choice of classes, this information is irrelevant. "We can't do anything about this," the social studies teacher reasons. "A" again raises the importance of considering the value of this information in a longitudinal sense," but the teachers end up rejecting the items as useless.

As noted above, the views expressed in this excerpt highlight the action orientation of the clinical perspective, as manifested in the concerns of King High teachers. Together with the other field notes excerpted and transcribed here, this helps to document that King High teachers do indeed approach information and their information needs from the clinical perspective.

There is nothing especially surprising in this finding. Teachers across the nation seem to adopt a clinical stance in seeking, interpreting, and using data about students (e.g., Dorr-Bremme, 1983). Nevertheless, the account presented here suggests that a substantial gap exists between teachers' routine ways of thinking about information, on the one hand, and, on the other, the ideal conditions and circumstances under which the systemic evaluation idea could function smoothly. This gap is currently quite visable in the organizational context at King High. What is more, if the national data just referenced are accurate, it promises to be a key contextual factor in many schools and districts.

While King High teachers' perspective on information is a particular kind of perspective (a clinical one), it also has certain generic features. Like members of other organizations, the teachers at King High are interested in information that has "theoretical or practical import for organizationally relevant purposes and routines" (Garfinkel, 1967, p. 191). It simply happens that, given the social organization of King High, the only organizationally relevant purposes and routines for teachers there are clinical in nature, i.e., taking action toward individual students and class groups. At present, the school maintains no regular organizational structures that bring staff members together and empower them to discuss and resolve common concerns.

As are most high schools in the United States, King High is organized into various academic departments. Department meetings occur, but they apparently do not consitute settings for dialogue and conjoint decision making. When CSE/UCLA staff member A suggested that some type of survey data might help departments plan their curricular emphases, faculty in the working group rejected the notion immediately. One teacher explained that "everyone sort of sidesteps disagreements over teaching methods and philosophy and things" during department meetings. Another added that departments meet infrequently and usually deal only with what courses individual members of the department want to teach, what books they want to order, and similar routine tasks. In another working group session, "A" asked whether "your departments" could use information on students' perceptions of instructional practices. After some initial confusion

about what "A" had in mind (several teachers asked in apparent disbelief, "Why?" and "For what?!"), one teacher answered, "No, this would be seen as threatening." The matter rested there.

King High also participates in the State School Improvement Program (SSIP). SSIP guidelines require schools to assemble a school site council which includes the principal and elected representatives of various constituencies: teachers, other staff (e.g., counselors, non-certified personnel), parents and other community members, and students. According to SSIP provisions, the site council has responsibility for assessing schoolwide needs, developing improvement objectives, planning activities to meet them, and evaluating the results of these efforts. SSIP Schools are encouraged to engage in comprehensive planning and to use the planning process as a catalyst to or motivator for dialogue and involvement. Some schools do so, but many treat the planning process merely as a hurdle that must be jumped in order to procure additional state monies (Dorr-Bremme, et al., 1979). King High seems to fall in the latter category. Several discussions of King High's SSIP program during working-group sessions suggested that a few administrative leaders have primary responsibility for SSIP plans. Thus, the SSIP site council does not appear to provide a forum for substantial teacher involvement in schoolwide planning and decision making. Similarly, other instruction-related programs at King High School appear to be the artifacts and concern of a few key administrators.

More generally, role boundaries are relatively well defined at King High. Teachers teach; counselors advise students, help them plan their programs, and deal with special problems; administrators set policy and concern themselves with schoolwide issues. That faculty members currently tend to accept and cooperate in sustaining these boundaries should be evident in some of the remarks quoted earlier. (Teachers referred the decisions on whether to gather certain student attitude data to counselors and administrators, for example. See Note #6.)

It is not the case, then, that teachers are simply predisposed to see information and their information needs from a clinical viewpoint. Their clinical perspective is in fact supported by the organizational arrangements within which they operate each day. Those arrangements provide no occasion for using information socially; they generate no need to consult school-level information. Thus, when teachers consider the marginal utility of new information -- when they implicitly and explicitly address the common organizational question, "Will it have been worth the cost to gather these data?" -- the criteria they employ and the decisions they make reflect the practical contingencies and exigencies they face on the job (c.f., Dorr-Bremme, 1983; Garfinkel, 1967). They can use additional information to operate clinically in the classroom. They cannot use information for anything else.

It follows from this analysis that King High's organizational structure is every bit as important a contextual influence in the development of systemic evaluation there as the teachers' clinical perspective is. Indeed, this analysis suggests that the two are interdependent.

Implications for School-Based Information Systems

One possible conclusion to draw from all of this is that, given the circumstantial realities of the way districts and schools are organized and, within this context, the predispositions of teachers to think and operate as clinicians, the idea of systemic evaluation and comprehensive information systems for local school improvement is not particularly viable -- at least not for the day-to-day instructional and planning activities of the types ordinarily engaged in by school staffs. Perhaps the current types of "management information systems" containing primarily test scores, course records, GPA, and so forth developed mostly for district accountability purposes are the most that we can hope for in terms of an information system concept.

But we would not accept such conclusions, at least not at this point in our studies or in the studies of others. Given the focus of this report on the social-clinical contrast, we did not, for example, report the many instances in which teachers, administrators and counselors in our work group demonstrated a "playful" or reflective stance toward information (see Sirotnik and Burstein, 1985). In fact, over the course of the study, staff behaved more and more like trained researchers -- not that this was desirable per se -- asking more questions of the data and requiring more sophisticated treatments of the data (e.g., bivariate and multivariate analyses). In other words, we observed that staff can interact with information in a fairly sophisticated (and not only clinical) manner when given the opportunity to do so.

Our working assumption, therefore, has been and continues to be that multilevel analysis and interpretation of school-based information has an immense potential for facilitating (not directing!)

individual-diagnostic, class-instructional, and school-organizational planning decisions and evaluations. This suggests the importance of an educative/training function for all persons involved in the development, implementation and use of comprehensive information systems. These persons include district staff, school staff, and outside resource staff (e.g., collaborative researchers from a nearby university). This suggestion is not meant in any way to be a condescending statement by university-based educators attempting to transport their "words of wisdom" down to the "less informed" level of school practitioners. The fact of the matter is that the educative function in collaboration is quite reciprocal -- we have been educated often during this project by school staff concerning the realities of schooling and the meaning and use of information in the context of practice.

Moreover, we do not infer (nor would we want inferred) any implication the teachers need to be "retrained" to think differently about their practical work, that is, to give up their clinical perspective and their use of "working knowledge" (Kennedy, 1984) in everyday decision-making. On the contrary, we see the clinical perspective as not only valid epistemologically, but of enormous use in practice. Rather, the issue is one of expanding the domain of potential knowledge available to school staffs in a way that complements personal knowledge. One rather obvious implication, for example, is that school-based information systems must be comprehensive enough to meet a variety of staff needs and must be immediately accessible to individual teachers upon request. The system, in other words, must be flexible; it must be capable of producing immediately student and class reports, for example, tailored

to the particular requests of individual teachers anytime during the school year.

Perhaps most clear, both conceptually and empirically, is the profound interaction between the socio-cultural context and circumstances of schooling and teaching and the predispositions of teachers to think socially and/or clinically about the use of information. Thus, the clinical orientation becomes enculturated into the school not only because it is a naturally useful perspective, but because it may be the only perspective that is viable in context. This suggests, then, the need to make significant changes in the context to at least have a forum to test the viability of using information in both clinical and social ways. Once clinical and social perspectives are acknowledged as "scientifically credible," significant space, time, and resources must be established at the building level to support school staff involvement in the construction and use of their own information system. This is not a "workshop-type" commitment for several "release" days over the course of the school year -- this is a long-term commitment on the part of the district and the school to formative inquiry and to the support necessary to carry it off.

Until we approximate these kinds of conditions in districts and schools, we will not approximate a definitive and empirical test of the potential utility of comprehensive information systems for local schools.

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